

WHAT IS CLAIMED IS:

1. An elevator system comprising:
a drive motor mounted at a head of an elevator shaft and having a drive pulley;
5 an elevator car movable in the elevator shaft;
a counterweight movable in the elevator shaft and arranged laterally of said
elevator car; and
a flat-belt-like support means supporting said elevator car by underlooping and
engaging said drive pulley, said support means being a wedge-ribbed belt
10 having a running surface facing said drive pulley and a plurality of ribs
and grooves formed in said running surface and extending in parallel in a
longitudinal direction of said support means.
2. The elevator system according to claim 1 wherein said ribs and grooves are
15 one of substantially triangular-shaped and trapezium-shaped in cross section.
3. The elevator system according to claim 2 wherein said ribs and grooves are
formed with lateral flanks at an angle in a range of 80° to 100°.
- 20 4. The elevator system according to claim 3 wherein said angle is 90°.
5. The elevator system according to claim 1 wherein said wedge-ribbed belt has
a plurality of transverse grooves formed in said running surface.
- 25 6. The elevator system according to claim 1 wherein said support means
includes at least two wedge-ribbed belt strands arranged in parallel.
7. The elevator system according to claim 1 wherein said drive pulley has an
external diameter in a range of 70 millimeters to 100 millimeters.
- 30 8. The elevator system according to claim 1 including a respective car guide rail
is mounted on two opposite sides of said elevator car and two counterweight guide rails

mounted on a counterweight side of said elevator car, and said drive motor together with said drive pulley being mounted on a motor carrier attached to one of said car guide rails and said two counterweight guide rails.

5 9. The elevator system according to claim 8 including a brake unit mounted on said motor carrier for acting upon said drive pulley.

10 10. The elevator system according to claim 1 wherein said drive motor and said drive pulley are mounted above a space in the elevator shaft taken up by said elevator car, a plane of said drive pulley being arranged vertically and at right angles to a car wall at a counterweight side of said elevator car and approximately in a middle of a car depth of said elevator car, a vertical projection of said drive pulley onto said counterweight side of said elevator car being outside a vertical projection of said counterweight side, and a part of a vertical projection of said drive motor being superimposed on said vertical
15 projection of said counterweight side of said elevator car.

 11. The elevator system according to claim 1 wherein said wedge-ribbed belt extends from a support means fixing point below said drive pulley and in a region of a vertical projection of said drive pulley, downwardly to a side, which faces said elevator
20 car of a periphery of a counterweight support roller, loops around said counterweight support roller, extends to a side remote from said elevator car of a periphery of said drive pulley, loops around said drive pulley and runs downwardly along a car wall at a counterweight side of said elevator car, loops by 90° around a respective car support roller mounted below said elevator car on each of two sides of said elevator car and runs
25 along a car wall remote from said counterweight upwardly to a second support means fixing point in the elevator shaft.

 12. The elevator system according to claim 1 including a guide roller mounted at a bottom of said elevator car and engaging said wedge-ribbed belt, said guide roller
30 having a plurality of ribs and grooves engaging said ribs and grooves of said wedge-ribbed belt for guidance of said wedge-ribbed belt.

13. An elevator car support for use in an elevator system having a drive motor mounted at a head of an elevator shaft and having a drive pulley for engaging the support, the support comprising: a wedge-ribbed belt adapted to support the elevator car by underlooping and engaging the drive pulley, said belt having a running surface
5 adapted to face the drive pulley and a plurality of ribs and grooves formed in said running surface and extending in parallel in a longitudinal direction of said belt.

14. The elevator car support according to claim 13 wherein said ribs and grooves are one of substantially triangular-shaped and trapezium-shaped in cross section.

10